to reduce the CLABSI (Catheter related bloodstream infection) in an acute care unit.
Methods: This unit has 63 beds with different internal medicine patients and was required to introduce a new CVC care bundle to reduce the high CLABSI. We use "Situational leading theory" (Paul Hersey & Kenneth Blanchard, 1969) and "Change theory" (Kurt Lewin, 1947) to introduce and also process the CVC infection control strategy.
Results: Totally, there were 197 central venous catheters inserted. The inserted sites were at sub-clavicular and internal jugular vein (156) and femoral site (41). The compliance rate of insertion was 69.54% (except insertion at emergency room 16.24%, refused by doctors 14.21%). The rate of CLABSI dropped from 1.91 to 0.95 ‰. After the use of two renowned theories, we introduced a CVC care bundle successfully and also reduced the rate of CLABSI (- 50.26%).
Conclusions: With this study to improve catheter-related bloodstream infections, thereby reducing the central venous catheter-related bloodstream infection rate, to enhance patient safety, and benefits.

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NATIONAL HAND HYGIENE CAMPAIGN IN KOREA: A PILOT STUDY

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Purpose: Hand hygiene (HH) is regarded as the most effective measure to prevent the spread of infection in healthcare settings. Before commencing a national hand hygiene campaign (NHHC) throughout all the hospitals in Korea, a pilot study funded by Korea centers for Disease control and Prevention was instituted in order to implement a standardized HH culture change program on the basis of the WHO multimodal hand hygiene improvement strategy.
Methods: Total 35 hospitals have voluntarily participated in this pilot study since November 2013, based on the WHO "5 Moments for Hand Hygiene" program. The coordination center developed a generic guide as well as a training program including slide presentations, lectures, and practical workshops. Three indicators were measured, including not only HH compliance by direct observation and the number of liters of alcohol-based hand-rubs (ABHRs) ordered per 1000 patient-days (PD) per month as process indicators, but also the number of MRSA bacteremia per 1000 PD per month as an outcome indicator.
Results: During the first year, a total of 141,835 HH moments were assessed; HH compliance rates in detail are shown in figure. The overall rate was 69.8%, but compliance after touching a patient's surroundings was lowest. HH compliance was highest among nursing staff (73.8%) and worst among medical staff (54.9%). Mean ABHRs supply was 13.4 L per 1000 PD. The rate of nosocomial MRSA bacteremia was 0.14 per 1000 PD.

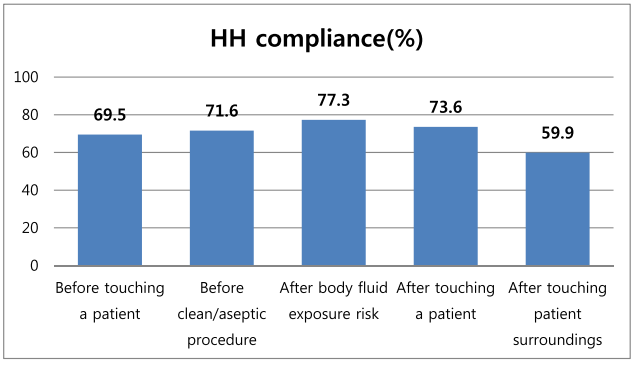

Figure. HH compliance rates for 35 hospitals during the first year of the pilot study.

Conclusions: The pilot campaign was associated with widespread improvements in HH compliance among healthcare workers in Korea. While it is too early to achieve the outstanding results, a comprehensive and multifaceted program would be needed to ensure further sustained improvement in HH compliance.

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EDUCATION OF HEALTHCARE WORKERS IN IMPROVING KNOWLEDGE AND SKILLS ON DISINFECTION AND STERILIZATION PROCEDURES AT A COMMUNITY BASED HEALTHCARE SETTING IN BANGLADESH

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Purpose: Proper cleaning, disinfection and sterilization are essential to ensure that the medical and surgical instruments used on patients do not transmit infections to them. Improper and substandard cleaning, disinfection and sterilization of medical equipments carry serious risk of transmission of various infections and environmental pathogens. The study was conducted to assess the role of education by updating the knowledge of HCWs and implementing standard practices of cleaning, disinfection and decontamination of medical instruments.
Methods: A one year pretest-posttest study with intervention was conducted in a secondary level community hospital. The study included a baseline survey, pretest-posttest with preformed questionnaire, intervention through classroom and hands-on training and a post-training survey. The compliance was assessed by covert observation through monitoring of the cleaning, disinfection and sterilization practices using a checklist. A total of 213 participants took part in the study where convenient sampling method was used. The study data was analyzed with SPSS.
Results: Gradual improvements on standard cleaning, disinfection and sterilization procedures including increased awareness and use of decontaminated instruments have been achieved during the study. Compliance to the standard cleaning, disinfection and sterilization procedures improved significantly from 12.5% to 100% ($p<0.0001$). Use of sterilization indicator tape increased remarkably from 0% to 100% ($p<0.0001$). Another momentous finding was increased compliance to the standard procedure of cleaning of the sterilization room from 25% to 88.9% ($p<0.0001$). The attitude and practice of maintaining and using cleaned, disinfected and sterilized instruments among physicians and nurses also improved from 24.63% and 13.54% to 69.57% and 69.80% respectively ($p<0.0001$).
Conclusions: The study results illustrate the importance of education and training in improving the standard disinfection and sterilization practices by updating the knowledge, building awareness and improving practices of the HCWs, which will eventually assist in preventing hospital associated infections and controlling emerging and re-emerging diseases.

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PREVENTIVE MEASURES FOR NOROVIRUS INFECTION OUTBREAK

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Purpose: An outbreak of infectious gastroenteritis caused by norovirus occurred from Dec. 30, 2012 to Jan. 5, 2013 and 11 patients were found at Himeji St. Mary's Hospital. To prevent recurrence of the outbreak, effective preventive measures were investigated.
Methods: A prospective investigation was conducted during an epidemic period from Dec. 1, 2013 to Feb. 29, 2014. Among 9 medical wards, 2 medical wards (the internal medicine ward A, 45 beds and the pediatric ward, 18 beds) were selected as the test wards where the new antiseptic (Welcept®) was introduced. It has *in vitro* virucidal activity against non-enveloped viruses including feline calicivirus and murine norovirus that were surrogates of norovirus. The existing antiseptic was used at other 7 wards which were as the control wards. Reeducation for the clinical staff in 2 test wards regarding the timing of hand hygiene was conducted according to the WHO guidelines issued in 2009.